ORDER NO. HAD8606541C4

Service Manual

Stereo Integrated Amplifier

Amplifier

SU-V75

Color

(K) . . . Black Type

Color	Areas
(K)	[PA] . . . Far East PX
(K)	[PE] . . . European Military

Please use this manual together with the service manual for Model No. SU-362, Order No. HAD8605532C1.

SPECIFICATIONS (IHF' 78)

■ AMPLIFIER SECTION

Rated minimum sine wave RMS power output
20 Hz~20 kHz both channels driven
0.05% total harmonic distortion
80 W per channel (8 ohms)

1 kHz continuous power output both channels driven 0.05% total harmonic distortion	85 W per channel (8 ohms)
Dynamic headroom	2 dB (8 ohms)
Total harmonic distortion	
half power at 1 kHz	0.03% (8 ohms)
SMPTE intermodulation distortion	0.05% (8 ohms)
Frequency response	
PHONO	RIAA standard curve ±0.8 dB
TUNER, CD/AUX, TAPE 1, TAPE 2/EXT	10 Hz~80 kHz, −3 dB
Input sensitivity	
PHONO	0.3 mV (2.5 mV, IHF '66)
TUNER, CD/AUX, TAPE 1, TAPE 2/EXT	17 mV (150 mV, IHF '66)
S/N (IHF, A)	
PHONO	74 dB (71 dB, IHF '66)
TUNER, CD/AUX, TAPE 1, TAPE 2/EXT	79 dB (97 dB, IHF '66)
Maximum input voltage	
PHONO	140 mV (150 mV, 1 kHz)
Input impedance	
PHONO	47 kilohms
TUNER, CD/AUX, TAPE 1, TAPE 2/EXT	15 kilohms
Tone controls	
BASS	50 Hz, +10 dB~−10 dB
TREBLE	20 kHz, +10 dB~−10 dB
Loudness control (volume at −30 dB)	50 Hz, +9 dB
Output voltage	
TAPE 1, TAPE 2/EXT (REC OUT)	150 mV
Low frequency damping factor	45 (8 ohms)
Load impedance	
MAIN or REMOTE	8~16 ohms
MAIN and REMOTE	8~16 ohms

■ GENERAL

Power consumption	460 W, 540 VA
Power supply	AC110/127/220/240V, 50/60Hz
Dimensions (W×H×D)	430 x 97 x 249.5 mm (16-15/16" x 3-13/16" x 9-13/16")
Weight	6.1kg (13.4 lb.)

Note:
Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

Specifications are subject to change without notice for further improvement.

NOTE :

1. The tuner and tape deck in this system are powered through the amplifier . When servicing these components, prepare an amplifier or an external power supply (servicing power supply fixture Part No. : SZZA1065C).
(For how to use the fixture, refer to the Service Manual of each model.)

Technics

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CHANGE IN REPLACEMENT PARTS LIST

Ref. No.	Change of Part No.		Description
	SU-362 →	SU-V75	
D801~803	LN463YCPP	LN363GCPP	LED, Input Select Indicator (3)
T1	SLT5N460	SLT5N462	Power Transformer (1)
VR301	EWCXSAF25B15	EWCXSAF15B15	Volume Control, 100kΩ(B)(1)
VR302	EWHF5A20G15	EWHF5AF25G15	Balance Control, 100kΩ(G)(1)
VR303, 304	EWCS6A020C5	EWCXEA011C15	Tone Controls, 100kΩ (C) (2)
F1	XBA1F50NU14	XBA2C31TR0	Fuse, 250V T3.15A (1)
F2	–	XBA2C16TR0	Fuse, 250V T1.6A (1)
S1	ESB8248V	–	Switch, Power (0)
S701	–	ESB8248V	Switch, Power (1)
S702	–	ESE37263	Switch, Voltage Select (1)
1	SYYU362KM	SYYUV75KPA	Front Panel Ass'y (1)
2	SBN1125	SBN1034-1	Knob, Volume (1)
3	SBN1089-1	SBN1032-4	Knob, Tone (3)
4	SBC666	SBC666-3	Button, Power (1)
6	SJT391	SJT347	Fuse Holder (4)
8	SBC719	SBC315-7	Button, Speaker (2)
9	SBC824	SBC824-1	Button, Selector (5)
10	SBC619	SBC619-1	Button, Loudness (1)
15	SJS9234B	SJS9231B	AC Inlet (1)
16	SJS9234A	SJS9231A	Cover, AC Inlet (1)
17	SJS9233B	SJS9232B	AC Outlet (1)
18	SJS9233A	SJS9232A	Cover, AC Outlet (1)
19	SGP6820B	SGP6822B	Rear Panel (1)
25	LN054330P	LN051330P2	LED Ass'y, Input Selector (1)
26	–	SMX897	Cover, Capacitor (1)
	–	SMX881	Cover, Insulation, Power Transformer (Primary) (1)
N7	–	XNS8D	Nut, Volume M'tg. (1)
N8	–	XYN3+C6FZ	Screw, Voltage Selector M'tg. (2)
N9	–	XWC4BFZ	Washer, Cabinet Screw (2)
A1	SJA172-1	SJA168-1	Accessory, AC Cord (1)
A2	SQF12766-2	SQF12800	Accessory, Instruction Book (1)
A3	–	SJP9215	Accessory, Plug Adaptor (1)
P1	SPG5728	SPG5751-1	Carton Box (1)
P2	SPS4719-2	SPS4719-1	Pad, Left (1)
P3	SPS4720-2	SPS4720-1	Pad, Right (1)
P5	–	SPS4802	Pad, Upper (1)
P6	–	SPS4815	Pad, Lower (1)

REPLACEMENT PARTS LIST

Notes:

1. Part numbers are indicated on most mechanical parts. Please use this part number for parts order.
2. Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. The parenthesized numbers in the column of description stand for the quantity per set.

Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC201	AN6552F	IC
IC301	M5218L	IC
IC401	⚠ SVI3105A	IC
IC601, 602	SVIBA6144	IC
TRANSISTOR		
Q501	2SA992E	Transistor
DIODES		
D501	MA165	Diode
D601~610	LN863RCPP	L.E.D.
D613	LN846RP	L.E.D.
D701	1SR35200	Rectifier
D801 ~803	LN363GCPP	L.E.D.
D804, 805	LN463YCPP	L.E.D.
D901~904	⚠ SVDS3V40	Rectifier
D905, 906	MA4140–M	Diode
COILS		
L401, 402	SLQY07G–40	Choke
TRANSFORMERS		
T1	⚠ SLT5N462	Power Source
VARIABLE RESISTORS		
VR301	EWCXSAF15B15	Volume, 100kΩ (B)
VR302	EWHF5AF25G15	Balance, 100kΩ (G)
VR303, 304	EWCXEA011C15	Tone, 100kΩ (C)
RELAY		
RL501	SSY126	Speaker

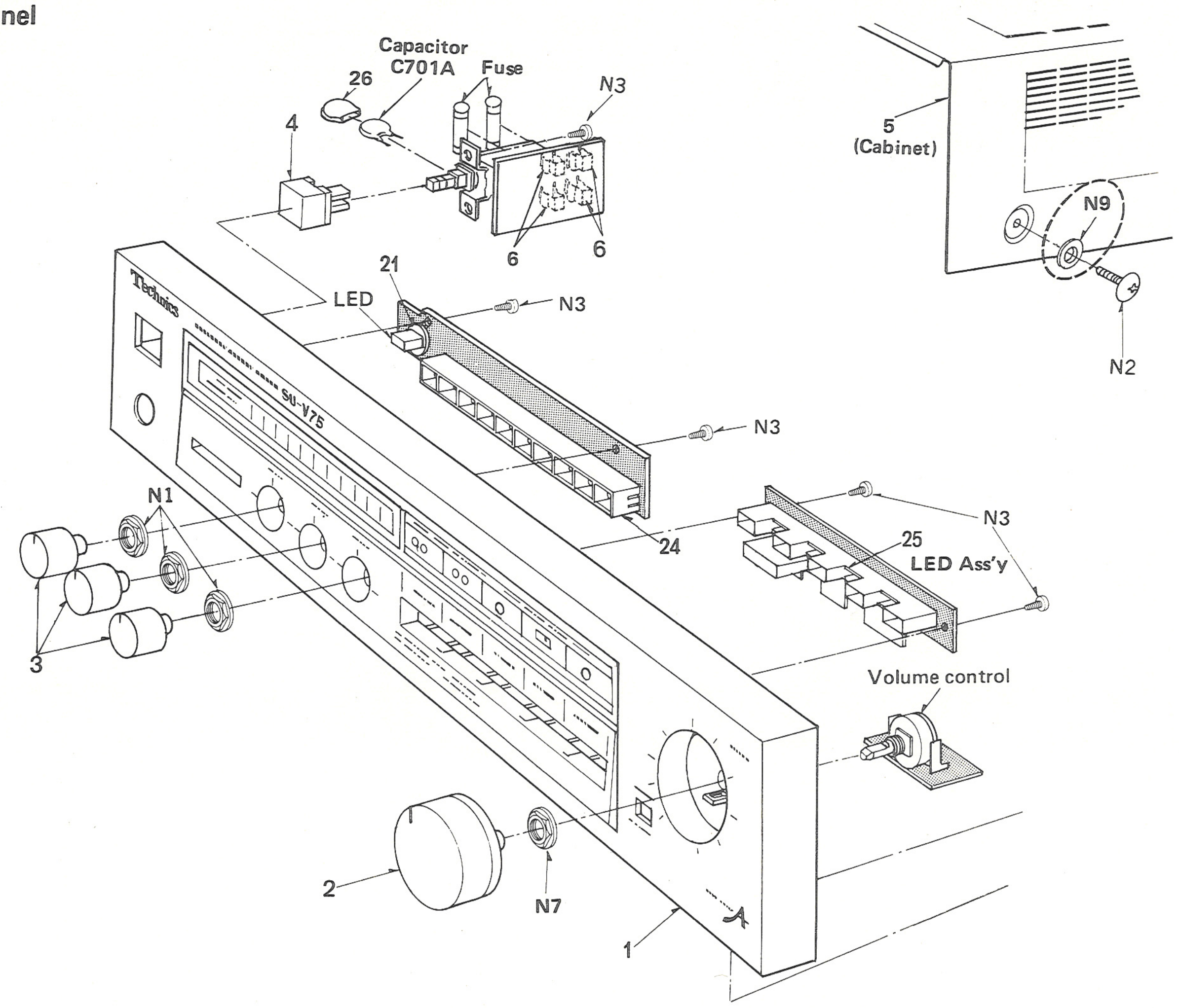
Ref. No.	Part No.	Description
FUSES		
F1	⚠ XBA2C31TRO	250V, T3.15A
F2	⚠ XBA2C16TRO	250V, T1.6A
SWITCHES		
S2, 3	SSH655	Input Selector
S4	SSH2116	Speaker
S701	⚠ ESB8248V	Power Source
S702	⚠ ESE37263	Voltage Selector

Ref. No.	Part No.	Description
CABINET and CHASSIS PARTS		
1	SYYUV75KPA	Front Panel Ass'y (1)
2	SBN1034–1	Knob, Volume (1)
3	SBN1032–4	Knob, Tone (3)
4	SBC666–3	Button, Power (1)
5	SKC1880K992	Cabinet (1)
6	SJT347	Fuse Holder (4)
7	SJJ134B	Jack, Headphone (1)
8	SBC315–7	Button, Speaker (2)
9	SBC824–1	Button, Selector (5)
10	SBC619–1	Button, Loudness (1)
11	SKUUZ900–KM	Bottom Board Ass'y (1)
〔 11-1	〔 SKL293	Foot (4)
12	SJF3062–5N	Input Terminal (1)
13	SJF4818	Speaker Terminal (1)
14	SJS306	Power Connector, 3 Pin (1)
15	⚠ SJS9231B	AC Inlet (1)
16	SJS9231A	AC Inlet Cover (1)
17	⚠ SJS9232B	AC Outlet (1)
18	SJS9232A	AC Outlet Cover (1)

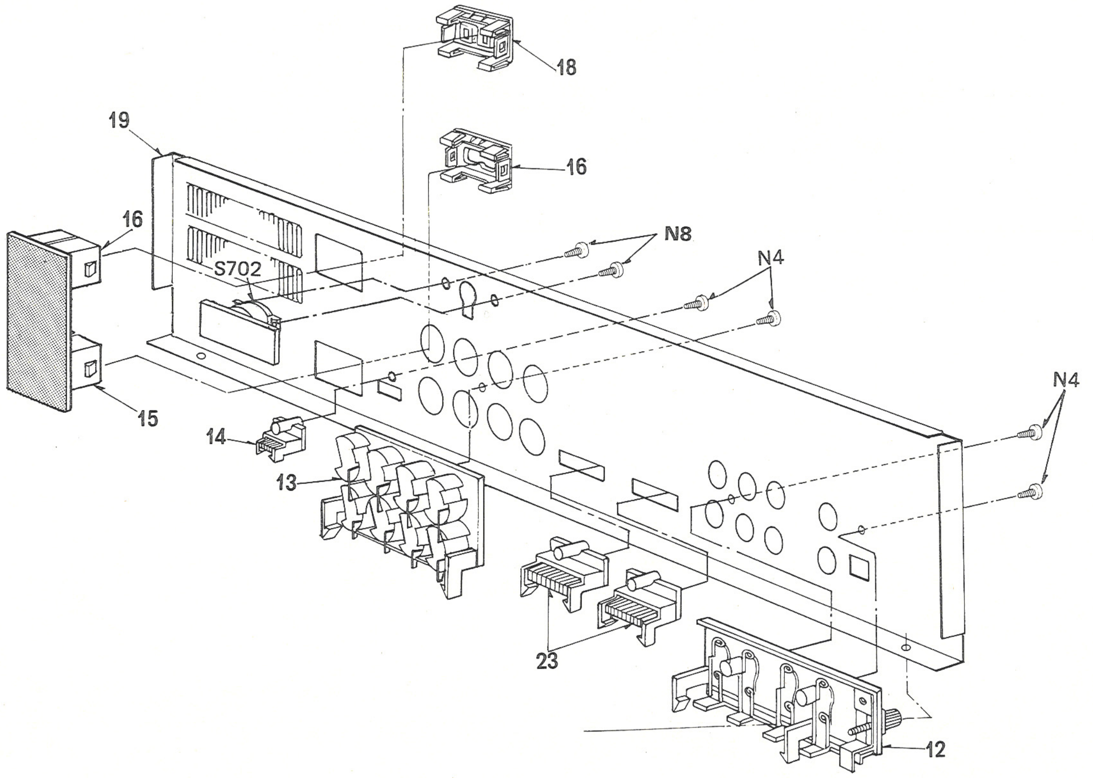
Ref. No.	Part No.	Description
CABINET and CHASSIS PARTS		
19	SGP6822B	Rear Panel (1)
20	SHR9094	Nylon Pin (1)
21	SHG6393	Spacer, L.E.D. (1)
22	SJT30343–V	Connector, 3 Pin (1)
22	SJT30843–V	Connector, 8 Pin (1)
22	SJT30643–V	Connector, 6 Pin (1)
23	SJS804	Connector, 8 Pin (2)
24	LN108327P1	L.E.D. Ass'y (1)
25	LN051330P2	L.E.D. Ass'y (1)
26	SMX897	Cover, Capacitor (1)
	SMX881	Cover, Insulation (1)
SCREWS		
N1	SNE4021	Nut (3)
N2	SNE2095–5	Cabinet (2)
N3	XTB3+8G	Tapping, ⊕3×8 (7)
N4	XTBS3+8JFZ1	Tapping, ⊕3×8 (19)
N5	SNE2126	Power IC (2)
N6	XTW3+8T	Tapping, ⊕3×8 (3)
N7	XNS8D	Nut (1)
N8	XYN3+C6FZ	Screw (2)
N9	XWC4BFZ	Washer (2)
ACCESSORIES		
A1	⚠ SJA168–1	AC Cord (1)
A2	SQF12800	Instruction Book (1)
A3	⚠ SJP9215	Plug Adaptor (1)
PACKING PARTS		
P1	SPG5751–1	Carton Box (1)
P2	SPS4719–1	Pad, Left (1)
P3	SPS4720–1	Pad, Right (1)
P4	SPP723	Polyethylene Sheet (1)
P5	SPS4802	Pad, Upper (1)
P6	SPS4815	Pad, Lower (1)

CHANGE OF EXPLODED VIEWS

- **Front panel**

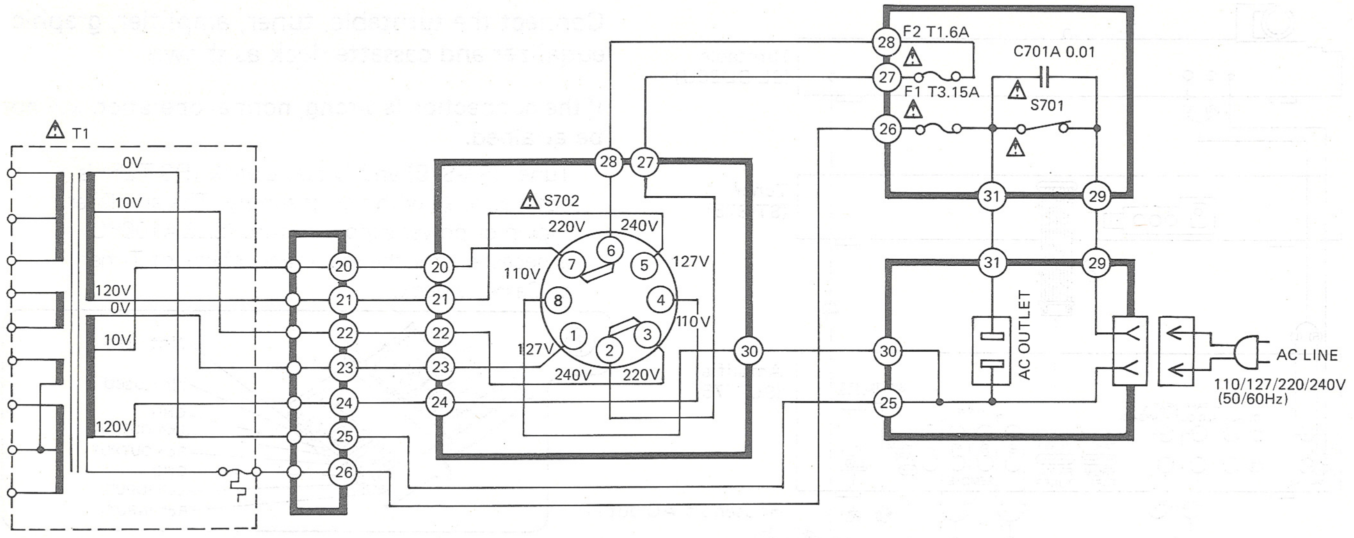

Capacitor C701A
Fuse
26
4
N3
5 (Cabinet)
N9
N2
21
LED
N3
6
6
Technics
SU-V75
N3
N1
24
25 LED Ass'y
N3
3
Volume control
2
N7
1

- **Raer panel**

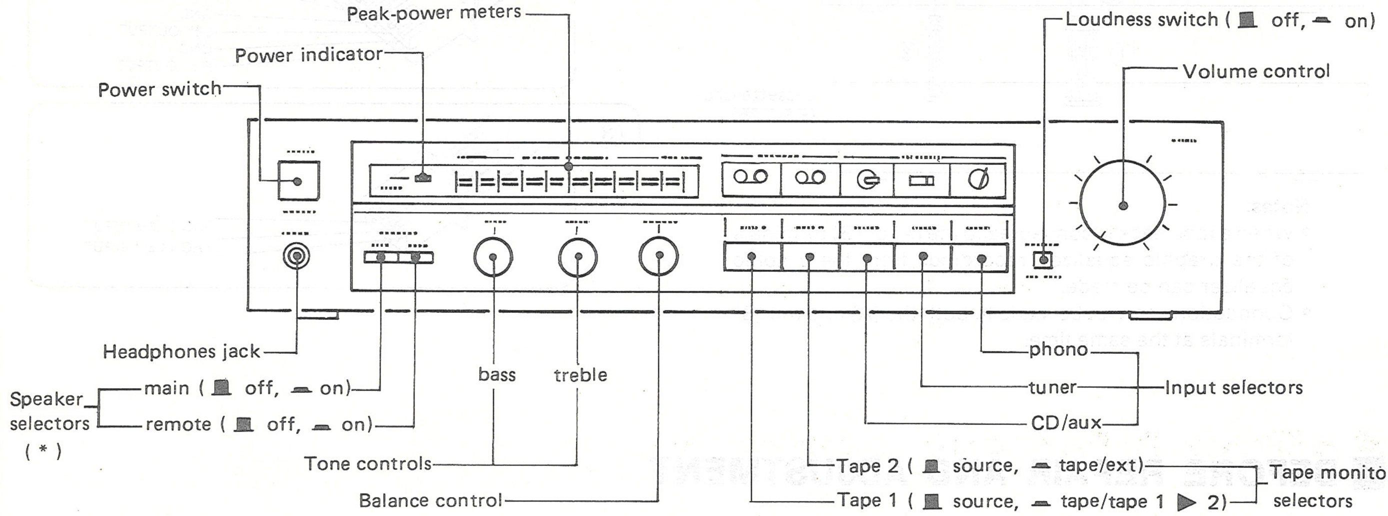

18
19
16
16
S702
N8
N4
N4
15
14
13
23
12

SCHEMATIC DIAGRAM

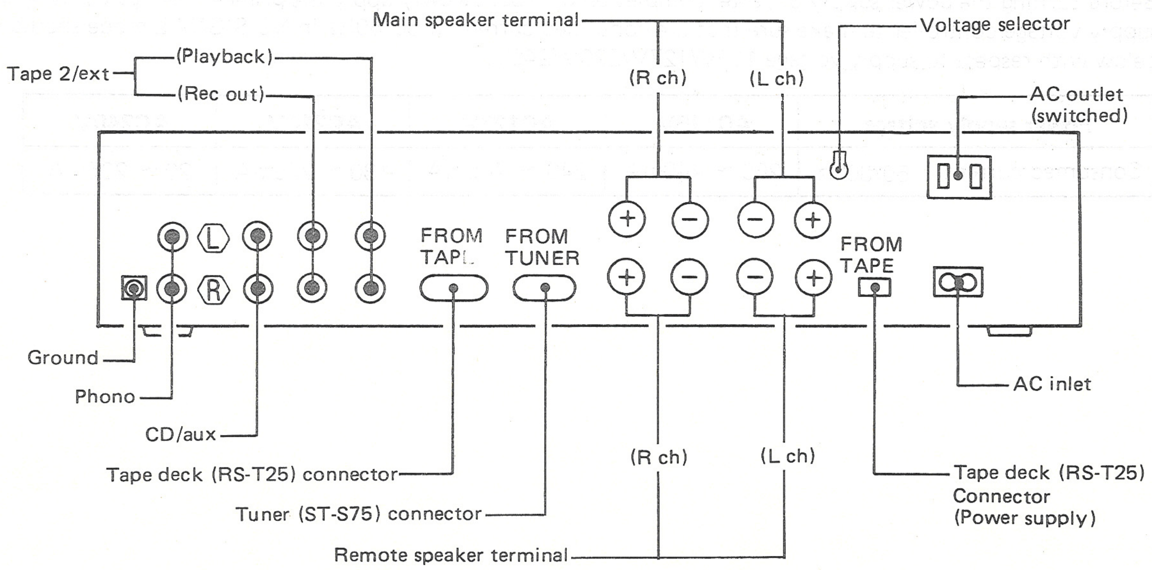
- **Power source circuit**


⚠ T1
0V
10V
120V
0V
10V
120V
20
21
22
23
24
25
26
28
27
⚠ S702
220V
240V
110V
127V
110V
127V
240V
220V
1
2
3
4
5
6
7
8
30
F2 T1.6A
⚠
F1 T3.15A
⚠
C701A 0.01
⚠
S701
⚠
31
29
AC OUTLET
AC LINE
110/127/220/240V
(50/60Hz)

LOCATION OF CONTROLS


Peak-power meters
Power indicator
Power switch
Loudness switch (▀ off, ▬ on)
Volume control
Headphones jack
Speaker selectors (*)
main (▀ off, ▬ on)
remote (▀ off, ▬ on)
bass
treble
Tone controls
Balance control
phono
tuner
CD/aux
Input selectors
Tape 2 (▀ source, ▬ tape/ext)
Tape 1 (▀ source, ▬ tape/tape 1 ▶ 2)
Tape monitor selectors

(*) When only one system of speakers is connected,
no sound will be heard if both selectors are pressed.

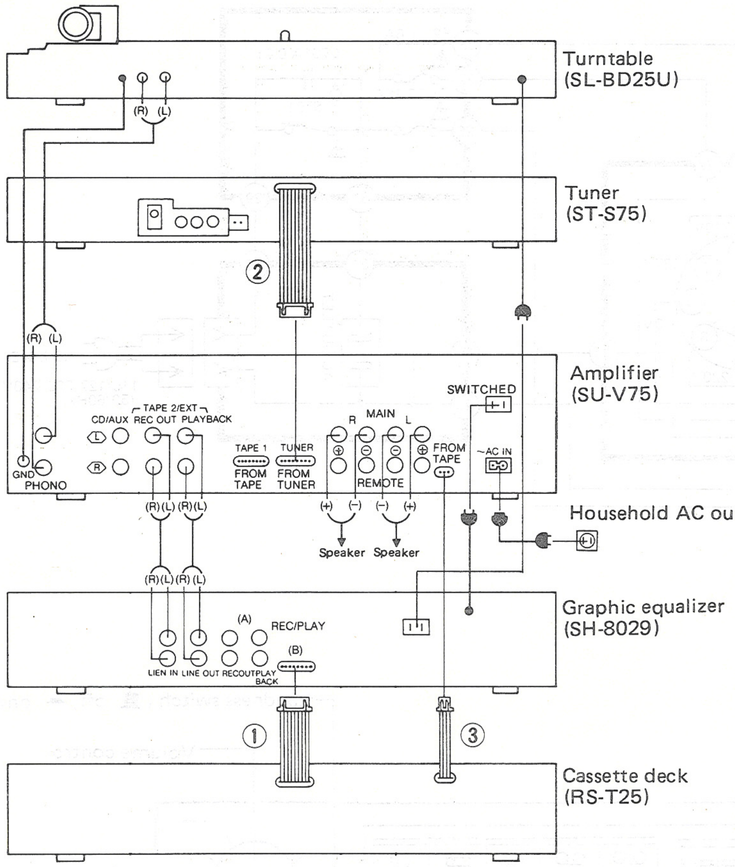

Main speaker terminal
(R ch)
(L ch)
Voltage selector
Tape 2/ext
(Playback)
(Rec out)
AC outlet (switched)
L
R
FROM TAPE
FROM TUNER
FROM TAPE
Ground
Phono
CD/aux
Tape deck (RS-T25) connector
Tuner (ST-S75) connector
Remote speaker terminal
(R ch)
(L ch)
AC inlet
Tape deck (RS-T25) Connector (Power supply)

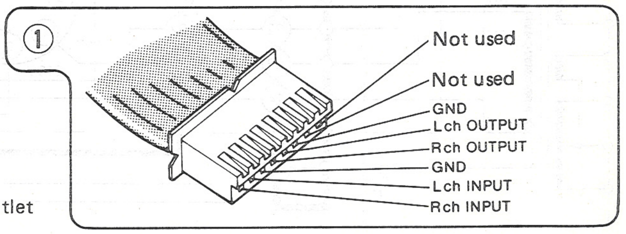
HOW TO CONNECT

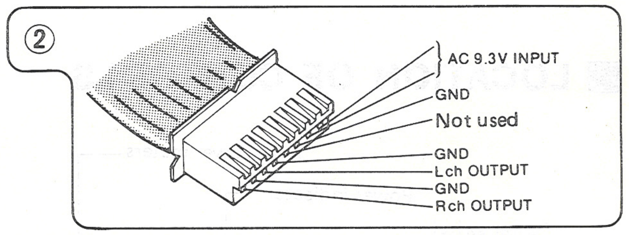
Connect the turntable, tuner, amplifier, graphic euqalizer and cassette deck as shown.

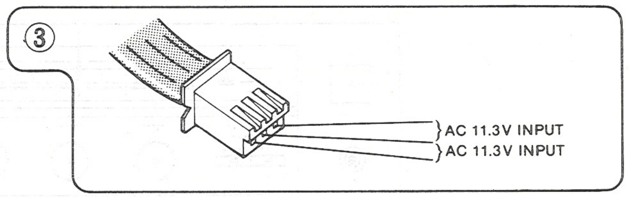
If the connection is wrong, normal operation will not be attained.

* Tuner (ST-S75) and Cassette deck (RS-T25) is not equipped with power supply. The amplifier shown or power supply fixture (SZZA1065C) is necessary for the repair and check of Tuner or Cassette deck.


Turntable
(SL-BD25U)
Tuner
(ST-S75)
②
(R) (L)
Amplifier
(SU-V75)
SWITCHED
CD/AUX
TAPE 2/EXT
REC OUT
PLAYBACK
TAPE 1
TUNER
FROM TAPE
FROM TUNER
MAIN
R
L
REMOTE
FROM TAPE
~AC IN
GND
PHONO
(R) (L) (R) (L)
(+) (−) (−) (+)
Speaker
Speaker
Household AC outlet
Graphic equalizer
(SH-8029)
(A)
REC/PLAY
(B)
LIEN IN
LINE OUT
RECOUT
PLAY BACK
①
③
Cassette deck
(RS-T25)


①
Not used
Not used
GND
Lch OUTPUT
Rch OUTPUT
GND
Lch INPUT
Rch INPUT


②
AC 9.3V INPUT
GND
Not used
GND
Lch OUTPUT
GND
Rch OUTPUT


③
AC 11.3V INPUT
AC 11.3V INPUT

Notes:

- When a tape deck is connected to the (A) or (B) terminals of the graphic equalizer, recordings from the graphic equalizer can be made.
- Connections cannot be made to both the (A) and the (B) terminals at the same time.

BEFORE REPAIR AND ADJUSTMENT

(1) Turn off the power supply. Using a 10Ω, 5W resistor, shortcircuit both ends of power supply capacitors (C901, C902) in order to discharge the voltage.

(2) Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50/60Hz in NO SIGNAL mode should be shown below with respect to supply voltage 110V/127V/220V/240V.

Power supply voltage	AC110V	AC127V	AC220V	AC240V
Consumed current 50/60Hz	260 ~ 440mA	240 ~ 405mA	130 ~ 225mA	120 ~ 205mA

Printed in Japan
860500400 Ⓚ KK
861000450

ORDER NO. HAD8605532C1
A1

Service Manual

Stereo Integrated Amplifier

Amplifier

SU-362

Color

(K) . . . Black Type

Color	Area
(K)	[M] . . . . U.S.A.

System
SC–3620

SPECIFICATIONS (IHF' 78)

■ AMPLIFIER SECTION

Rated minimum sine wave RMS power output
20 Hz~20 kHz both channels driven
0.5% total harmonic distortion
100 W per channel (8 ohms)

1 kHz continuous power output both channels driven 0.5% total harmonic distortion	105 W per channel (8 ohms)
Dynamic headroom	1.5 dB (8 ohms)
Total harmonic distortion	
half power at 1 kHz	0.05% (8 ohms)
SMPTE intermodulation distortion	0.5% (8 ohms)
Frequency response	
PHONO	RIAA standard curve ±0.8 dB
TUNER, CD/AUX, TAPE 1, TAPE 2/EXT	10 Hz~80 kHz, –3 dB
Input sensitivity	
PHONO	0.3 mV (2.5 mV, IHF '66)
TUNER, CD/AUX, TAPE 1, TAPE 2/EXT	17 mV (150 mV, IHF '66)
S/N (IHF, A)	
PHONO MM	74 dB (71 dB, IHF '66)
TUNER, CD/AUX, TAPE 1, TAPE 2/EXT	80 dB (97 dB, IHF '66)
Maximum input voltage	
PHONO MM	140 mV (150 mV, 1 kHz)
Input impedance	
PHONO	47 kilohms
TUNER, CD/AUX, TAPE 1, TAPE 2/EXT	15 kilohms
Tone controls	
BASS	50 Hz, +10 dB~–10 dB
TREBLE	20 kHz, +10 dB~–10 dB
Loudness control (volume at –30 dB)	50 Hz, +9 dB
Output voltage	
TAPE 1, TAPE 2/EXT (REC OUT)	150 mV
Low frequency damping factor	45 (8 ohms)
Load impedance	
MAIN or REMOTE	8~16 ohms
MAIN and REMOTE	8~16 ohms

■ GENERAL

Power consumption	350 W, 450 VA
Power supply	AC 120V, 60 Hz
Dimensions (W×H×D)	430 × 97 × 249.5 mm (16-15/16" × 3-13/16" × 9-13/16")
Weight	6.1 kg (13.4 lb.)

Note:
Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).
Specifications are subject to change without notice for further improvement.

NOTE :

1. The tuner and tape deck in this system are powered through the amplifier . When servicing these components, prepare an amplifier or an external power supply (servicing power supply fixture Part No. : SZZA1058C). (For how to use the fixture, refer to the Service Manual of each model.)

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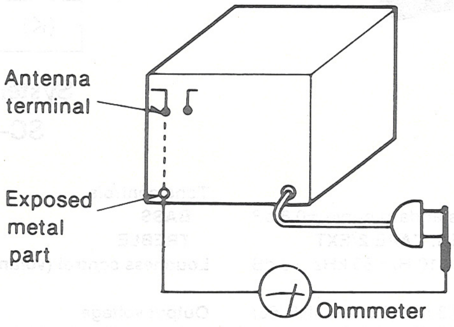
SAFETY PRECAUTION

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

• INSULATION RESISTANCE TEST

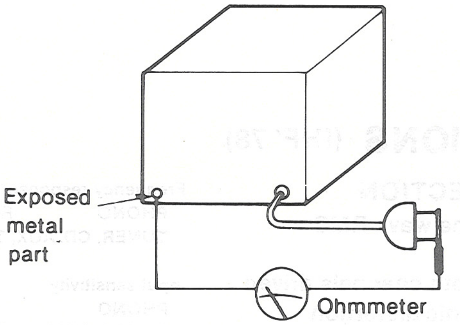
1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts. (Fig. A) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. B)

Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.



(Fig. A)

Resistance = 3MΩ—5.2MΩ



(Fig. B)

Resistance = Approx ∞

4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:

- ● No sound is heard when the power is turned on.
- ● Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

BEFORE REPAIR

Disconnect AC power, Discharge both Power Supply Capacitors C901 and C902 through a 10Ω, 5W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may distroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at 120V, 60Hz in NO SIGNAL mode should be 305 ~ 515mA.

LOCATION OF CONTROLS

●Power switch/indicator

●Peak-power meters (power level meter)

These meters indicate the peak-power value of the output level to the speaker systems.

Note:

If speaker systems with an impedance of 8 ohms are connected, the actual value can be read directly. If, however, the impedance is 16 ohms, the actual output value is ½ of the indicated value.

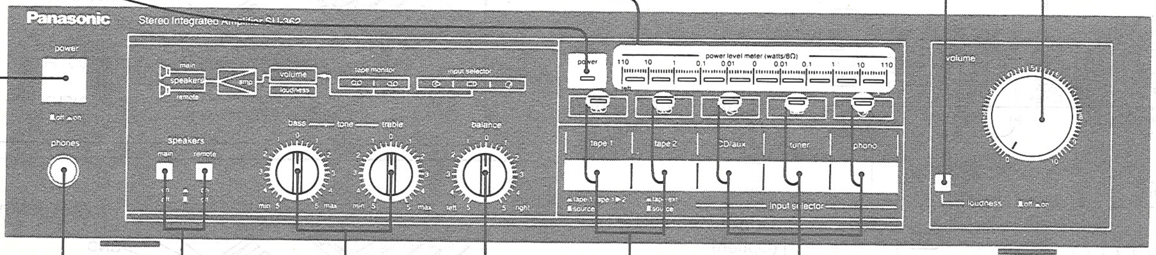
$$\text{Actual output} = \frac{\text{indicated value} \times 8\Omega}{\text{speaker impedance } (\Omega)}$$

●Loudness switch

Set to the "on" position when listening to music at low volume. Auditory perception of sound in the low frequency range falls off at low volume, but when the switch is in this position, this deficiency is compensated for, so that the full impact of the musical performance can be enjoyed.

●Volume control

This control is used to raise or lower the volume (sound) level.


Panasonic
Stereo Integrated Amplifier SU-362
power
off on
phones
speakers
main remote
volume
loudness
tape monitor
input selector
bass
tone
treble
balance
min
max
left
right
power level meter (watts/8Ω)
tape 1
tape 2
CD/aux
tuner
phono
tape 1 tape 1▶2
source
tape/ext
source
input selector
volume
loudness off on

●Headphones jack

●Balance control

This control is used to adjust left/right volume balance.

●Input selectors/indicators

These selectors are used to select the sound source to be heard, such as a disc, radio broadcast, etc. (the corresponding indicator will illuminate.)

●Speaker selectors

main (▮_▬):

Sound can be heard from the speaker systems connected to the "MAIN" terminals.

remote (▮_▬):

Sound can be heard from the speaker systems connected to the "REMOTE" terminals.

Note:

When only one system of speakers is connected, no sound will be heard if both selectors are pressed.

●Tone controls (bass/treble)

The bass control is used to adjust the low range sound. The treble control is used to adjust the high range sound.

●Tape monitor selectors/indicators (tape 1/tape 2)

(The indicator will illuminate)

source (▬_▮):

Set to this position when one of the input selectors is pressed.

tape 1/tape 1▶2 (▮_▬):

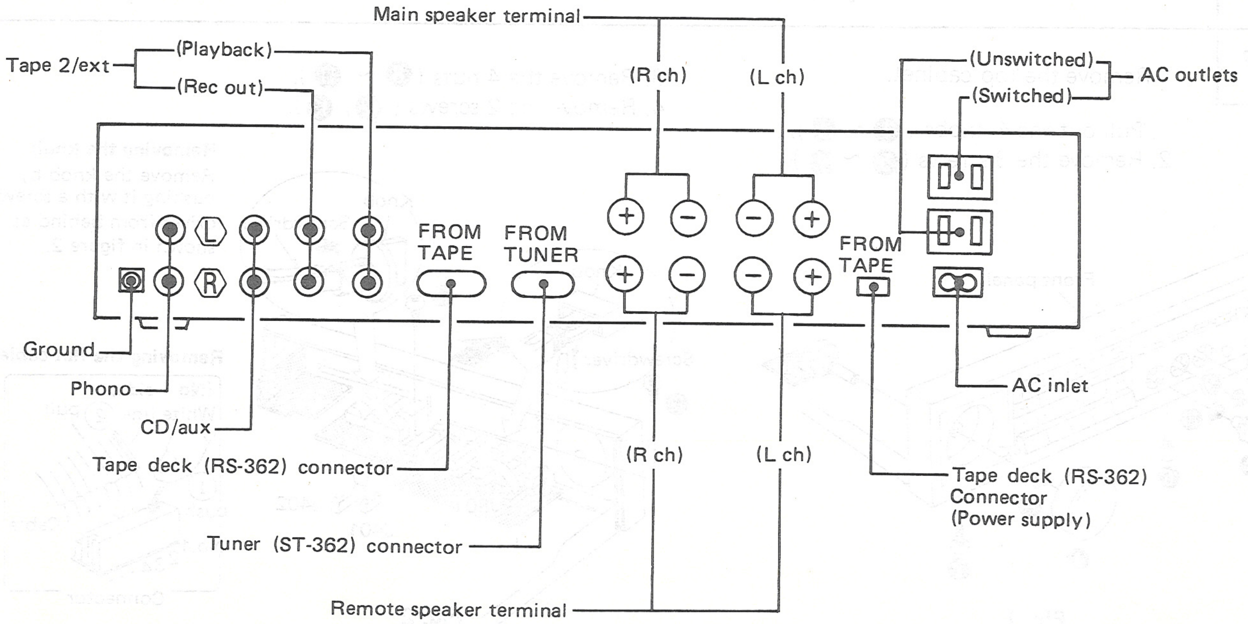
Set to this position to playback or monitor the sound from tape deck of this system or to record from tape deck of this system to a second tape deck connected to the "TAPE 2/EXT" terminals.

tape/ext (▮_▬):

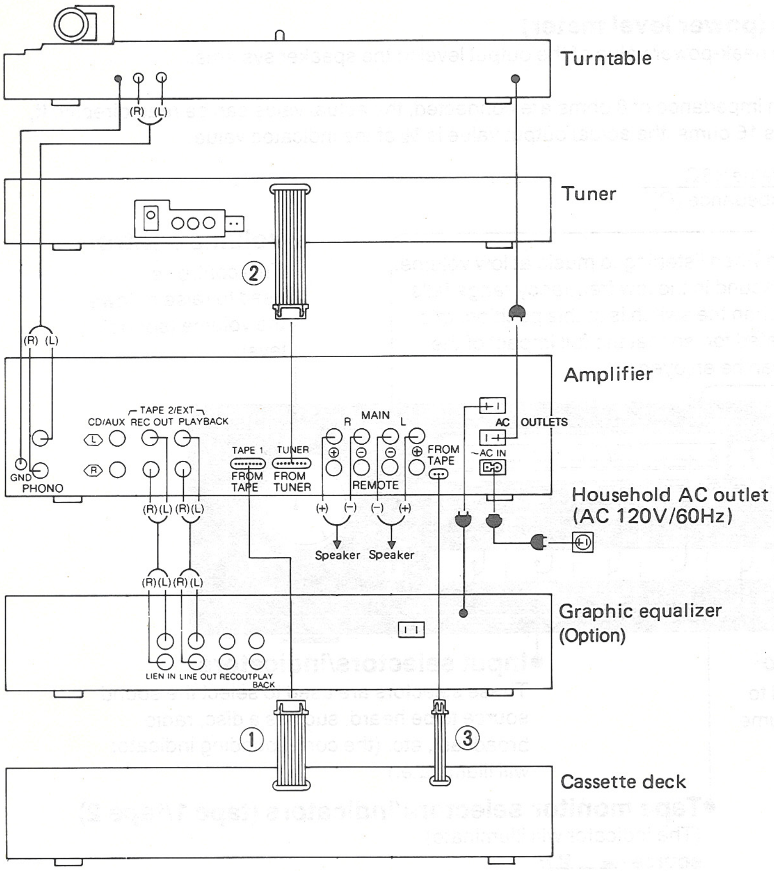
Set to this position to playback or monitor the sound from a second tape deck connected to the TAPE 2/EXT terminals.

Note:

If both tape-monitor selectors are pressed at the same time, only the sound from second tape deck will be heard.


Main speaker terminal
Tape 2/ext
(Playback)
(Rec out)
(R ch)
(L ch)
(Unswitched)
(Switched)
AC outlets
L
R
FROM TAPE
FROM TUNER
FROM TAPE
Ground
Phono
CD/aux
Tape deck (RS-362) connector
Tuner (ST-362) connector
(R ch)
(L ch)
AC inlet
Tape deck (RS-362) Connector (Power supply)
Remote speaker terminal

■ HOW TO CONNECT

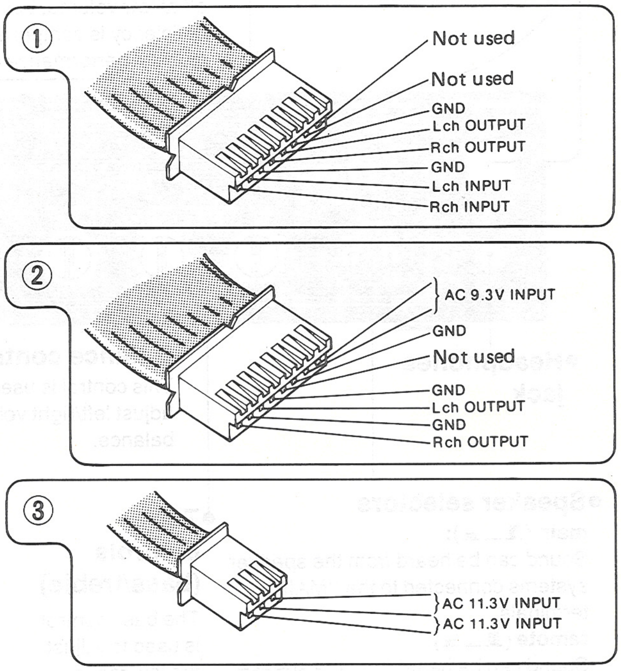


Turntable
(R) (L)
Tuner
②
(R) (L)
Amplifier
CD/AUX
TAPE 2/EXT
REC OUT
PLAYBACK
GND
PHONO
TAPE 1
FROM TAPE
TUNER
FROM TUNER
MAIN
R
L
REMOTE
FROM TAPE
AC
OUTLETS
~AC IN
(R) (L) (R) (L)
(+) (−) (−) (+)
Speaker
Speaker
Household AC outlet
(AC 120V/60Hz)
(R) (L) (R) (L)
Graphic equalizer
(Option)
LIEN IN
LINE OUT
RECOUT
PLAY BACK
①
③
Cassette deck

Connect the turntable, tuner, amplifier, graphic euqalizer and cassette deck as shown.

If the connection is wrong, normal operation will not be attained.

* Tuner (ST-362) and Cassette deck (RS-362) is not equipped with power supply. The amplifier shown or power supply fixture (SZZA1058C) is necessary for the repair and check of Tuner or Cassette deck.



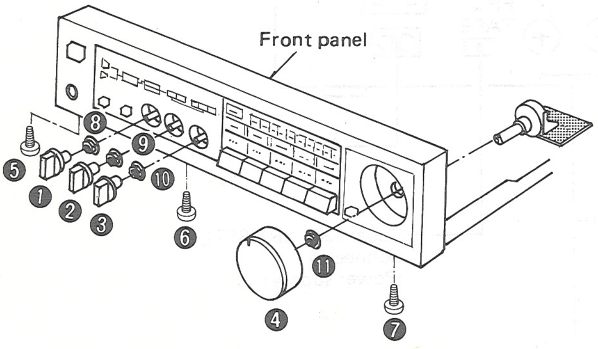
①
Not used
Not used
GND
Lch OUTPUT
Rch OUTPUT
GND
Lch INPUT
Rch INPUT
②
AC 9.3V INPUT
GND
Not used
GND
Lch OUTPUT
GND
Rch OUTPUT
③
AC 11.3V INPUT
AC 11.3V INPUT

■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1	**How to remove the front panel**
Procedure 1	

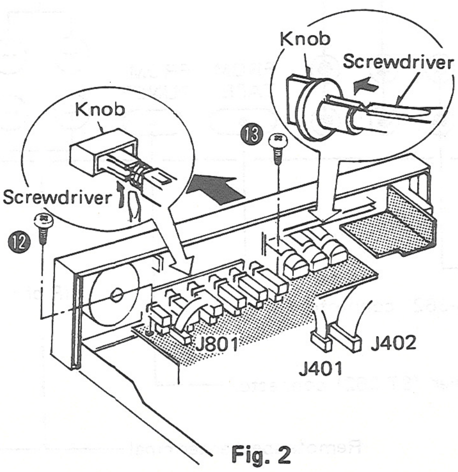
* Remove the top cabinet.

1. Pull out the 4 knobs (❶ ~ ❹).
2. Remove the 3 screws (❺ ~ ❼).
3. Remove the 4 nuts (❽ ~ ⓫).
4. Remove the 2 screws (⓬, ⓭).



Front panel
❺
❶
❷
❸
❽
❾
❿
❻
⓫
❹
❼

Fig. 1



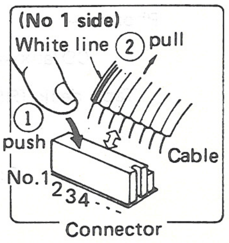
Knob
Screwdriver
Knob
Screwdriver
⓭
⓬
J801
J401
J402

Fig. 2

Removing the knob

Remove the knob by pushing it with a screw driver from behind as shown in figure 2.

Removing the flat cable



(No 1 side)
White line
② pull
① push
Cable
No.1 2 3 4 . . .
Connector

Ref. No. 2

How to remove the P.C.B.

Procedure 1 → 2

1. Pill-up the 2 tabs (❶ , ❷).
2. Remove the headphones P.C.B.
3. Remove the power switch knob.
4. Remove the 1 screw (❸).
5. Remove the power switch P.C.B.

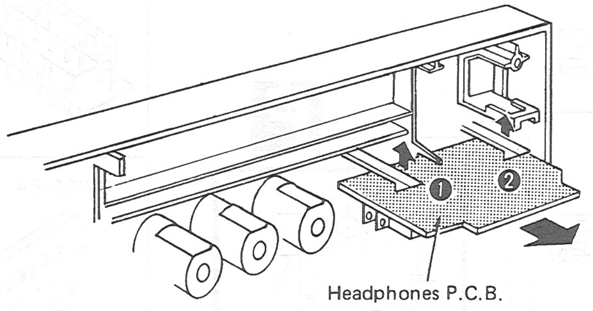
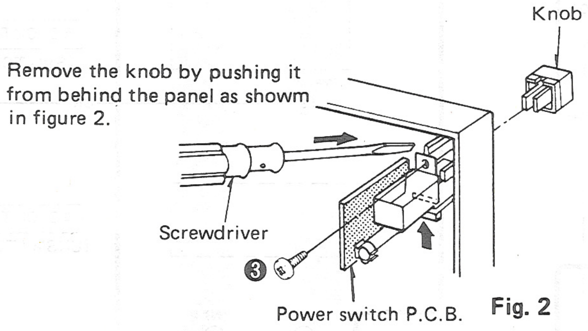


Fig. 1



Remove the knob by pushing it from behind the panel as showm in figure 2.

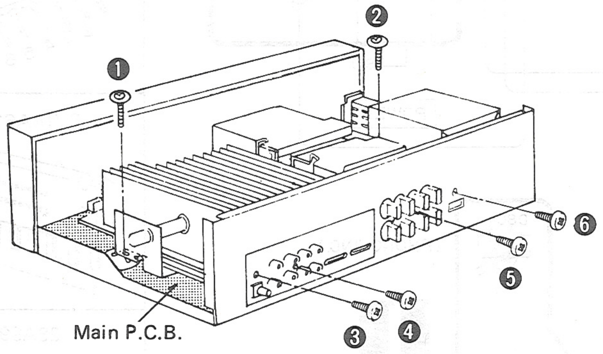
Fig. 2

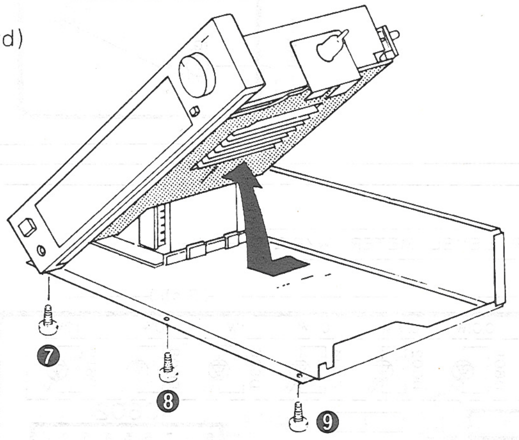
Ref. No. 3

How to remove the main P.C.B.

Procedure 3

1. Remove the 9 screws (❶ ~ ❾).
2. Remove the main P.C.B. (or remove the bottom board)

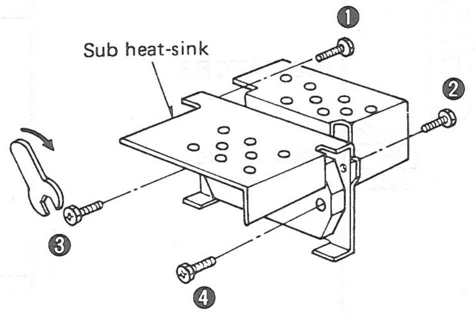




Ref. No. 4

How to remove the power amplifier IC.

Procedure 3 → 4



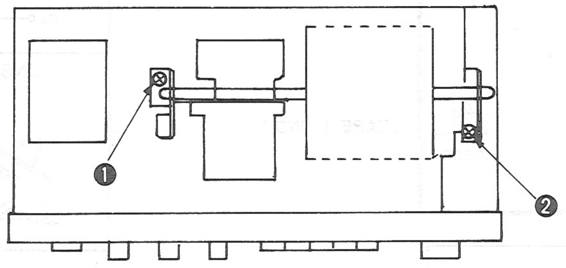
1. Unsolder the power IC.
2. Remove the 2 screws (❶ , ❷).
3. Remove the sub heat-sink.
4. Remove the 2 screws (❸ , ❹).

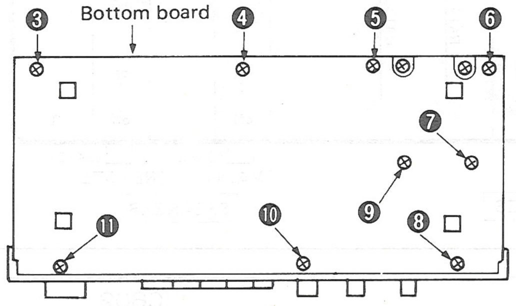
- When mounting the power IC, apply silicon thermal compound (SZZ0L15 or equivalent) to the rear of the power IC.

Ref. No. 5

How to remove the bottom board

Remove the 11 screws (❶ ~ ⓫).





RESISTORS & CAPACITORS

Notes:
1. Part numbers are indicated on most mechanical parts.
   Please use this part number for parts orders.
2. Important safety notice:
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
3. The unit of resistance is OHM (Ω).
   K = 1000Ω, M = 1000KΩ
4. The unit of capacitance is MICROFARAD (μF).
   $P = 10^{-6} \mu F$

Numbering System of Resistor

Example

ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value

Resistor Type	Wattage	Tolerance
ERD : Carbon ERG : Metal Oxide ERC : Solid	12A : 1/2W 2A : 2W S2 : 1/4W 25 : 1/4W S1 : 1/2W	J : ±5% K : ±10%

Numbering System of Capacitor

Example

ECKD	1H	102	Z	F
Type	Volgage	Value	Tolerance	Peculiarity

Capacitor Type	Voltage		Tolerance
ECE : Electrolytic ECC : Ceramic ECK : Ceramic ECF : Semi-conductor ECQ : Polyester	0J : 6.3V 1V : 35V 1C : 16V 1E : 25V D : 25V 1H : 50V	66V : 66V 1J : 63V KC : 400V AC 2A : 100V 2H : 500V	K : ±10% Z : +80%, –20% M : ±20% P : +100%, –0%

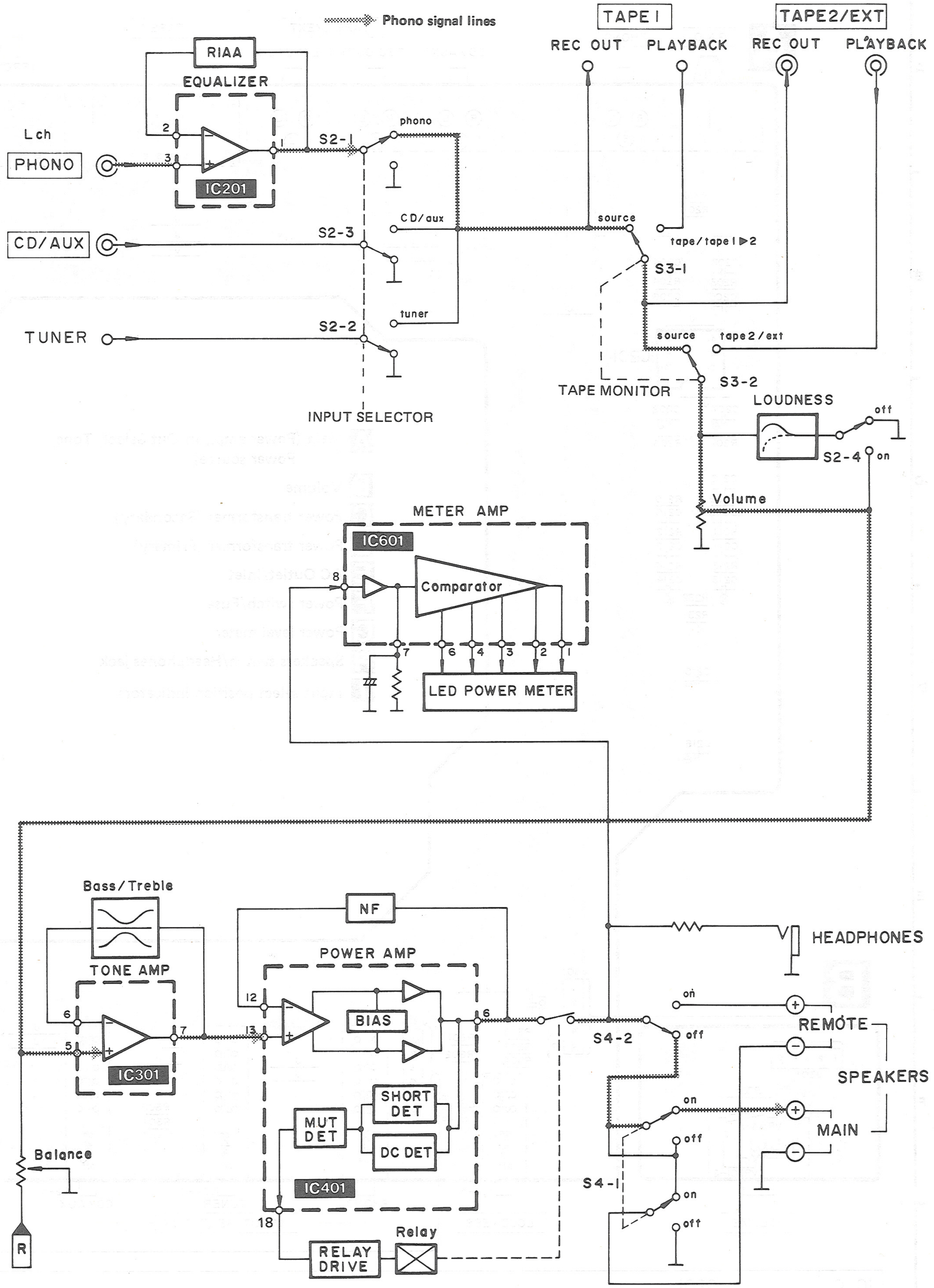
● RESISTORS

Ref. No.		Part No.	Value
R1	⚠	ERC12ZGK335	3.3M
R201, 202		ERDS2TJ391	390
R203, 204		ERDS2TJ473	47K
R207, 208		ERDS2TJ271	270
R209, 210		ERDS2TJ184	180K
R211, 212		ERDS2TJ123	12K
R213, 214		ERDS2TJ563	56K
R231, 232		ERDS2TJ561	560
R301, 302		ERDS2TJ222	2.2K
R303, 304		ERDS2TJ473	47K
R305, 306		ERDS2TJ183	18K
R309, 310		ERDS2TJ474	470K
R311, 312		ERDS2TJ474	470K
R313, 314		ERDS2TJ183	18K
R315, 316		ERDS2TJ332	3.3K
R317, 318		ERDS2TJ152	1.5K
R319, 320		ERDS2TJ681	680
R321, 322		ERDS2TJ223	22K
R323, 324		ERDS2TJ392	3.9K
R325, 326		ERDS2TJ392	3.9K
R331, 332		ERDS2TJ153	15K
R401, 402		ERDS2TJ222	2.2K
R403, 404		ERDS2TJ393	39K
R405, 406		ERDS2TJ272	2.7K
R407, 408		ERDS2TJ393	39K
R409, 410		ERDS1FJ100	10
R411, 412		ERDS2TJ470	47
R413, 414		ERG2ANJ331	330
R415, 416		ERDS2TJ561	560
R501		ERDS2TJ223	22K
R502	⚠	ERG2ANJ122	1.2K
R503	⚠	ERDS2TJ473	47K
R504	⚠	ERDS2TJ824	820K
R505		ERDS2TJ154	150K
R601, 602		ERDS2TJ824	820K
R603, 604		ERDS2TJ223	22K
R605, 606		ERDS2TJ103	10K
R607		ERDS2TJ561	560
R801, 802		ERDS2TJ391	390
R901, 902	⚠	ERG2ANJ222	2.2K
R905		ERD25FJ470	47

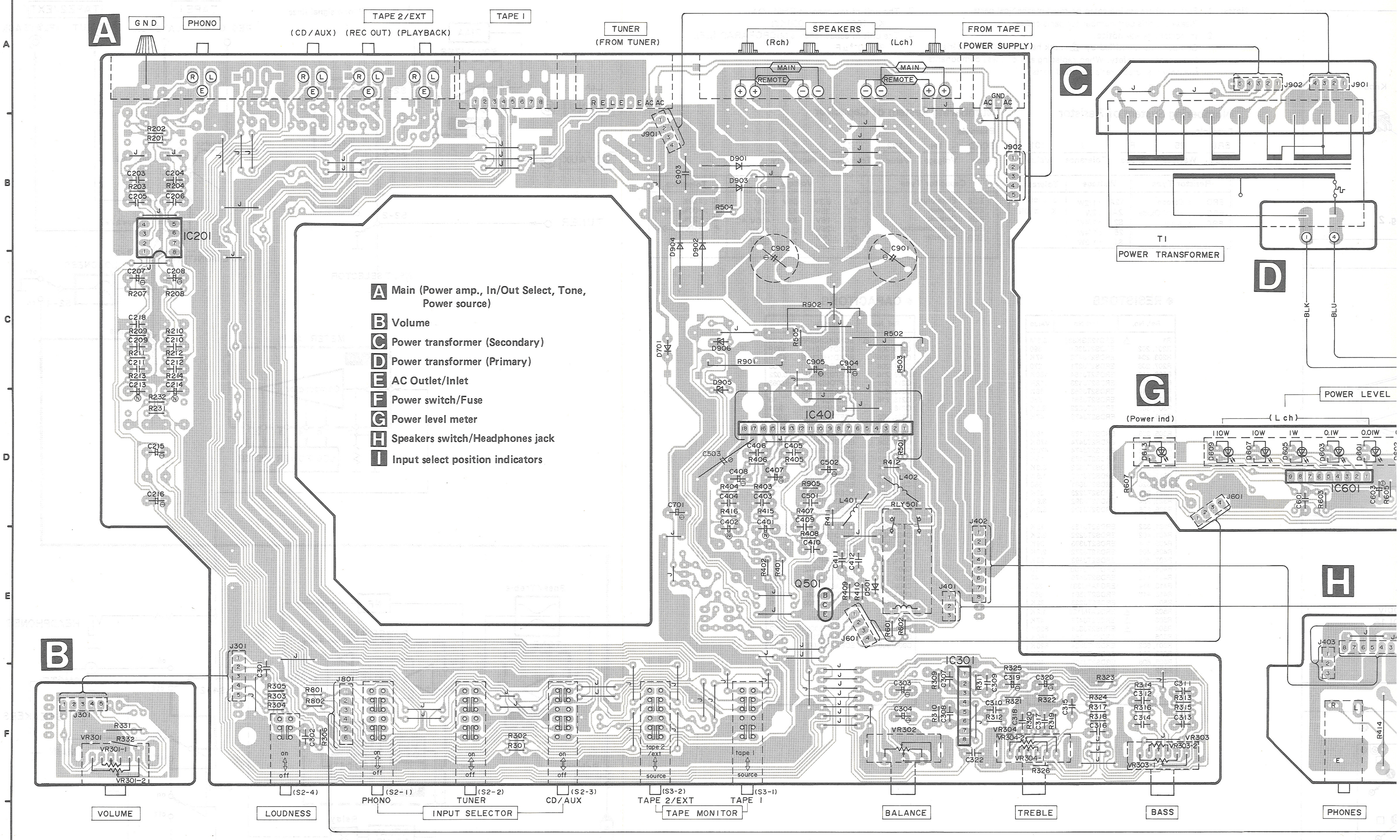
● CAPACITORS

Ref. No.		Part No.	Value
C1	⚠	ECKDKC103PF2	0.01
C203, 204		ECCD1H101K	100P
C205, 206		ECKD1H471KB	470P
C207, 208		ECEA0JU330	33
C209, 210		ECFTD223KXL	0.022
C211, 212		ECFTD682KXL	0.0068
C213, 214		ECEA1HN010S	1
C215, 216		ECEA1CU101	10
C218		ECKD1H103ZF	0.01
C301, 302		ECFTD823KXL	0.082
C303, 304		ECEA1EU3R3	3.3
C307, 308		ECKD1H331KB	330P
C309, 310		ECCD1H390K	39P
C311, 312		ECFTD123KXL	0.012
C313, 314		ECFTD683KXL	0.068
C315, 316		ECFTD562KXL	0.0056
C317, 318		ECFTD273KXL	0.027
C319, 320		ECEA1CU100	10
C322		ECKD1H103ZF	0.01
C401, 402		ECEA1HN010S	1
C403, 404		ECKD1H391KB	390P
C405, 406		ECKD1H102KB	0.001
C407, 408		ECEA1CU220	22
C409, 410		ECCD1H120K	12P
C411, 412		ECKD1H473ZF	0.047
C501		ECQV1H224JZ	0.22
C502		ECEA1HU330	33
C503		ECEA0JU331	330
C601, 602		ECFTD223KXL	0.022
C603, 604		ECEA1CKS100	10
C701		ECEA1CU471	470
C901, 902	⚠	ECES66V802U	8200
C903	⚠	ECKD2H103PE	0.01
C904, 905	⚠	ECEA2AG100S	10

BLOCK DIAGRAM


Phono signal lines
TAPE I
REC OUT
PLAYBACK
TAPE2/EXT
REC OUT
PLAYBACK
RIAA
EQUALIZER
Lch
PHONO
2
3
1
IC201
S2-1
phono
CD/AUX
S2-3
CD/aux
source
tape/tape I ▶2
S3-1
TUNER
S2-2
tuner
source
tape2/ext
S3-2
TAPE MONITOR
INPUT SELECTOR
LOUDNESS
off
S2-4
on
Volume
METER AMP
IC601
8
Comparator
7
6
4
3
2
1
LED POWER METER
Bass/Treble
TONE AMP
6
5
7
IC301
NF
POWER AMP
12
13
BIAS
6
MUT DET
SHORT DET
DC DET
IC401
18
RELAY DRIVE
Relay
HEADPHONES
on
S4-2
off
REMOTE
SPEAKERS
on
MAIN
off
S4-1
on
off
Balance
R

CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
GND
PHONO
TAPE 2/EXT
(CD/AUX)
(REC OUT)
(PLAYBACK)
TAPE I
TUNER
(FROM TUNER)
SPEAKERS
(Rch)
(Lch)
MAIN
REMOTE
FROM TAPE I
(POWER SUPPLY)
R
L
E
J901
J902
IC201
IC401
IC301
IC601
Q501
RLY501
L401
L402
D901
D902
D903
D904
D905
D906
D701
C901
C902
C903
C904
C905
R902
R901
R502
R503
R504
R505
R501
J402
J401
J601
J301
J801
J403
T1
POWER TRANSFORMER
BLK
BLU
(Power ind)
POWER LEVEL
(L ch)
110W
10W
1W
0.1W
0.01W
D613
D609
D607
D605
D603
D601
VR301
VR301-1
VR301-2
VR302
VR303
VR303-1
VR303-2
VR304
VR304-1
VR304-2
on
off
tape 2/ext
tape 1
source
(S2-4)
(S2-1)
(S2-2)
(S2-3)
(S3-2)
(S3-1)
PHONO
TUNER
CD/AUX
TAPE 2/EXT
TAPE I
VOLUME
LOUDNESS
INPUT SELECTOR
TAPE MONITOR
BALANCE
TREBLE
BASS
PHONES

- **A** Main (Power amp., In/Out Select, Tone, Power source)
- **B** Volume
- **C** Power transformer (Secondary)
- **D** Power transformer (Primary)
- **E** AC Outlet/Inlet
- **F** Power switch/Fuse
- **G** Power level meter
- **H** Speakers switch/Headphones jack
- **I** Input select position indicators

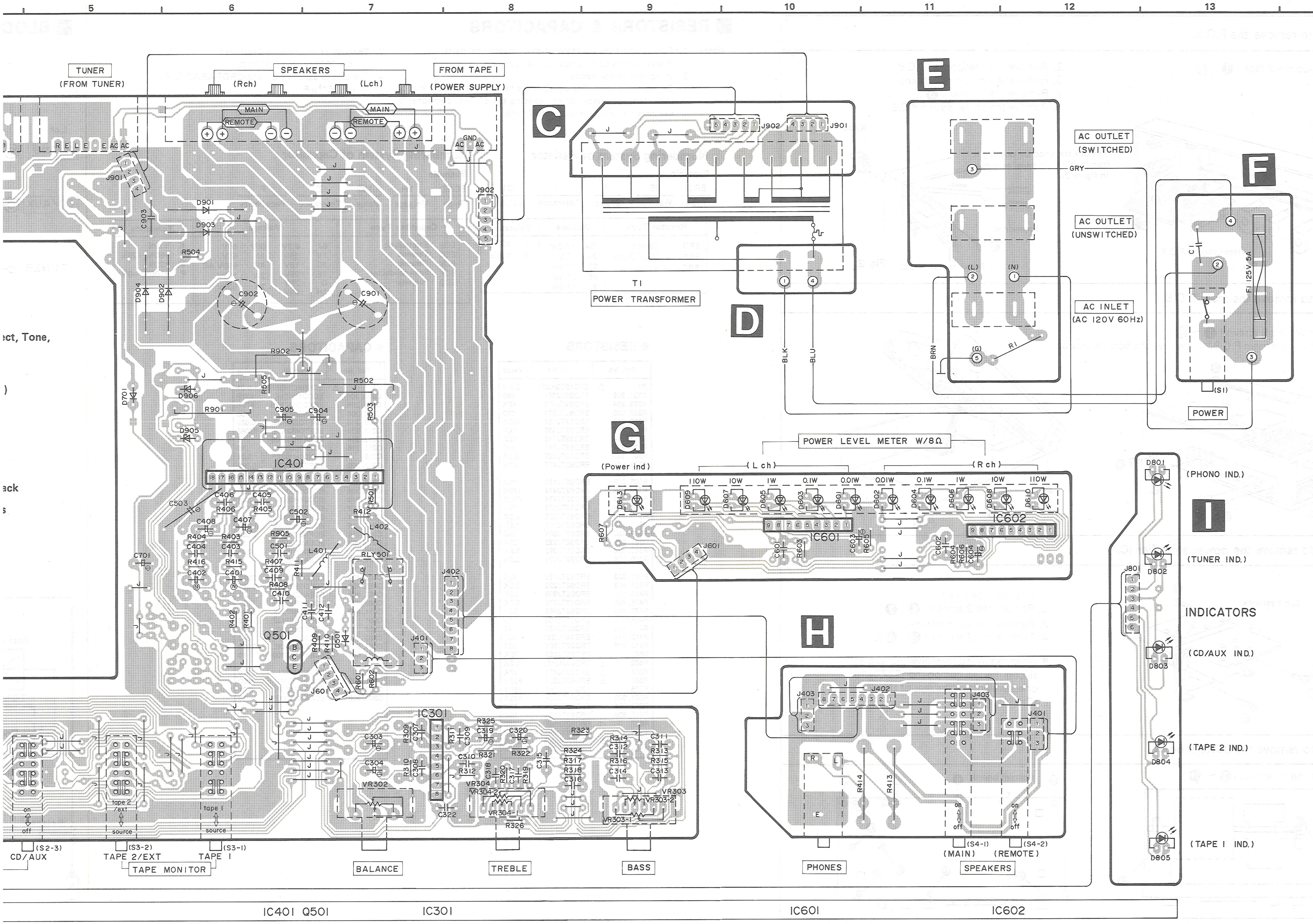
IC, Q	IC201	IC401 Q501	IC301	IC601

ect, Tone,

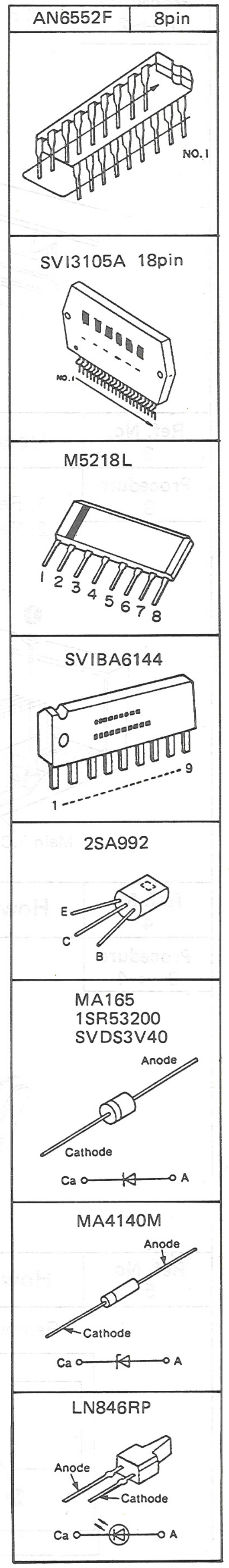
)

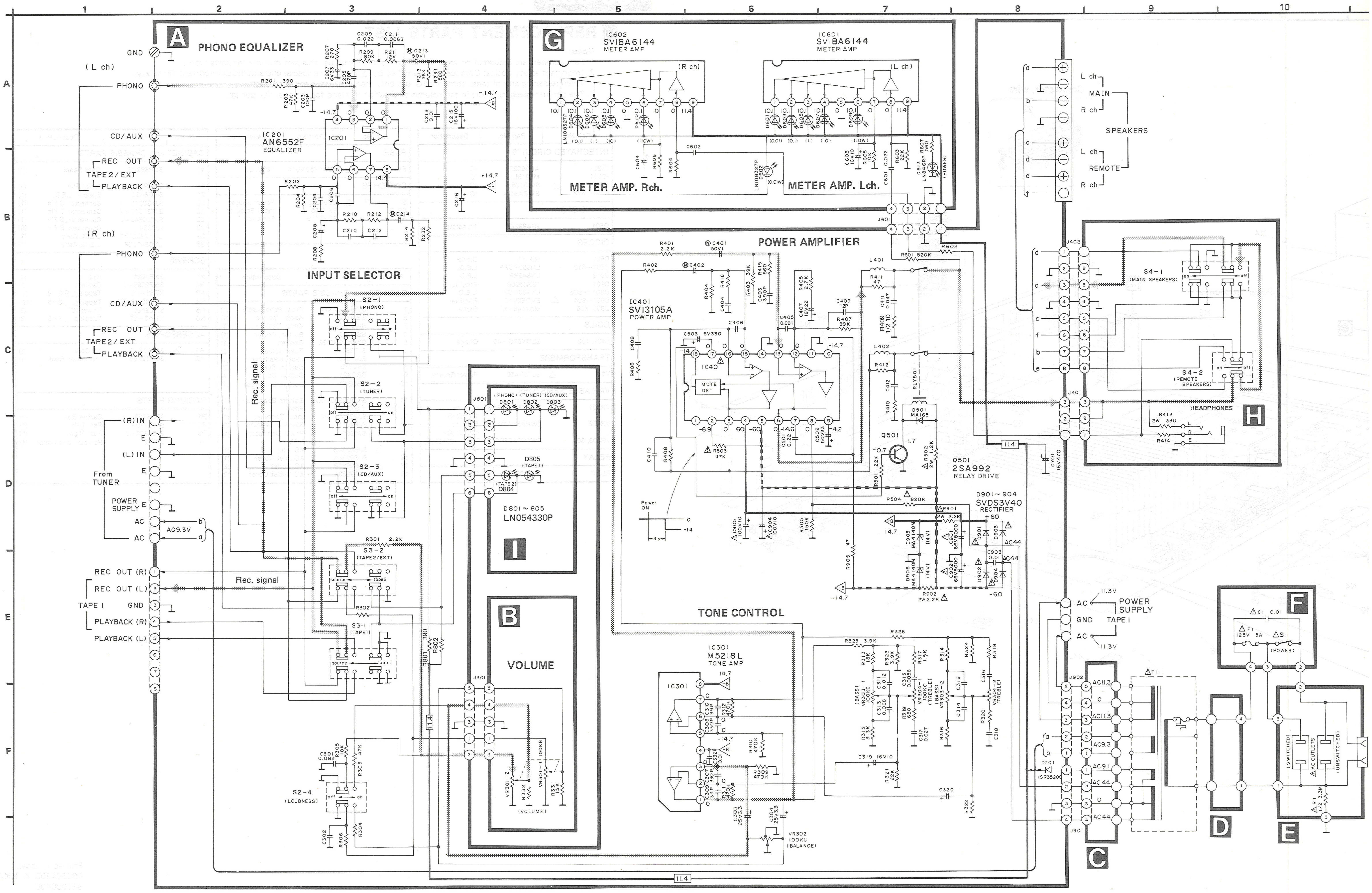
ack

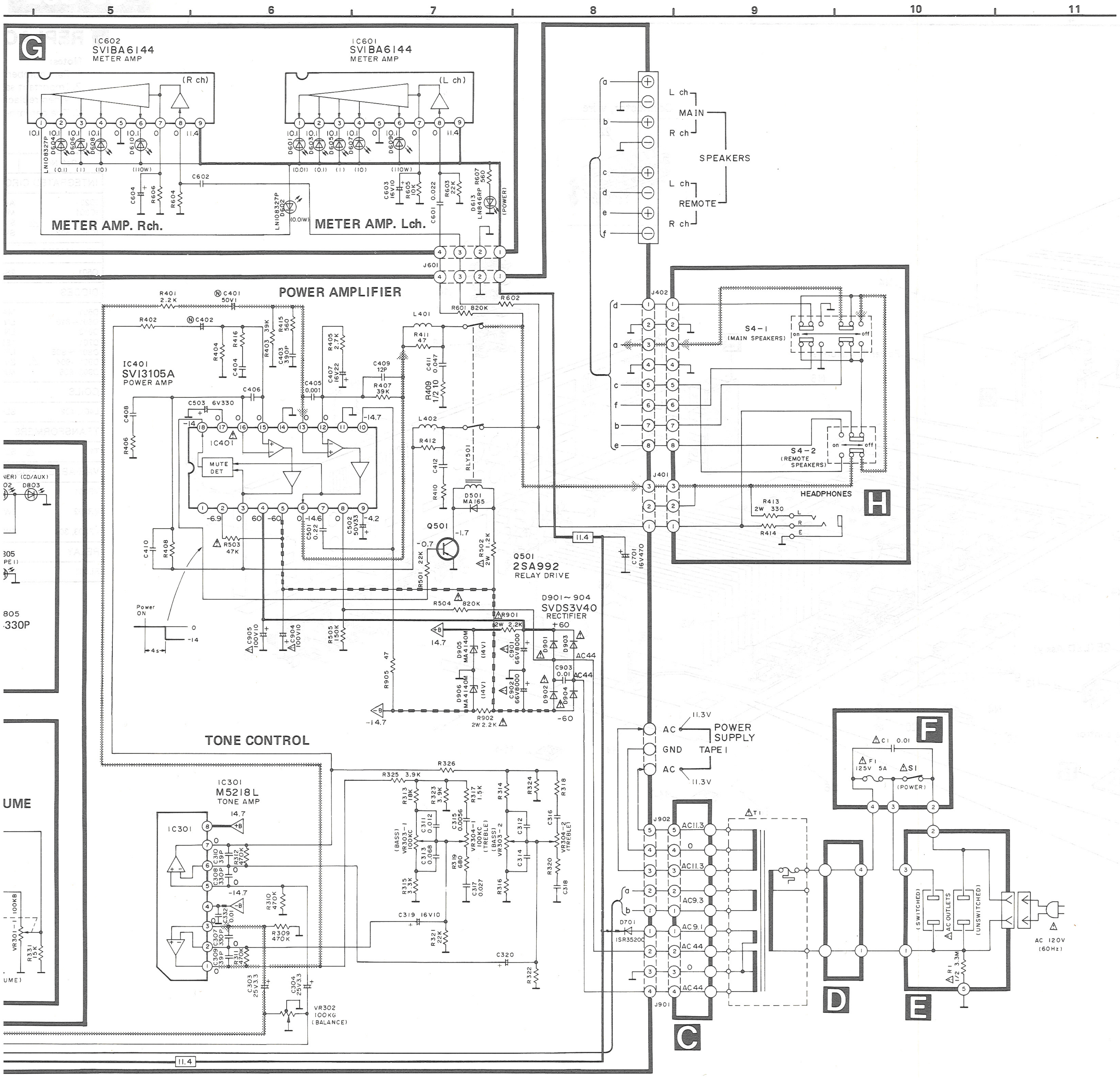
s


5
6
7
8
9
10
11
12
13
TUNER
(FROM TUNER)
SPEAKERS
(Rch)
(Lch)
FROM TAPE I
(POWER SUPPLY)
MAIN
REMOTE
GND
AC
J901
J902
D901
D903
C903
R504
D904
D902
C902
C901
R902
R505
R502
R503
D906
D701
R901
C905
C904
D905
IC401
C503
C406
R406
C405
R405
C502
R501
R411
C408
C407
L402
R404
R403
R905
C404
C403
C501
C701
R416
R415
R407
L401
RLY501
C402
C401
C409
R408
C410
J402
C411
C412
R402
R401
Q501
B
C
E
R409
R410
D501
J401
R601
R602
J601
IC301
R325
C320
R323
R314
C311
C303
R309
C307
R311
C309
C319
C312
R313
C310
R321
R322
C315
R324
R316
R315
C304
R310
C308
R312
R320
C317
R319
R317
R318
C316
C314
C313
VR302
VR304
VR304-2
VR303
VR303-2
VR303-1
C322
R326
on
off
tape 2/ext
source
tape 1
CD/AUX
(S2-3)
(S3-2)
TAPE 2/EXT
(S3-1)
TAPE 1
TAPE MONITOR
BALANCE
TREBLE
BASS
C
J902
J901
T1
POWER TRANSFORMER
D
BLK
BLU
E
AC OUTLET
(SWITCHED)
GRY
AC OUTLET
(UNSWITCHED)
AC INLET
(AC 120V 60Hz)
(L)
(N)
(G)
R1
BRN
F
C1
F1 125V 5A
(S1)
POWER
G
POWER LEVEL METER W/8Ω
(Power ind)
(L ch)
(R ch)
110W
10W
1W
0.1W
0.01W
D613
D609
D607
D605
D603
D601
D602
D604
D606
D608
D610
IC602
IC601
R607
J601
C601
R603
C603
R605
C602
R604
R606
C604
H
J403
J402
J401
R
L
E
R414
R413
(S4-1)
(S4-2)
(MAIN)
(REMOTE)
PHONES
SPEAKERS
I
D801
(PHONO IND.)
D802
(TUNER IND.)
J801
INDICATORS
D803
(CD/AUX IND.)
D804
(TAPE 2 IND.)
D805
(TAPE 1 IND.)
IC401 Q501
IC301
IC601
IC602

- **Terminal guide of transistors, diodes and IC's**


AN6552F
8pin
NO.1
SVI3105A 18pin
NO.1
M5218L
1 2 3 4 5 6 7 8
SVIBA6144
1
9
2SA992
E
C
B
MA165
1SR53200
SVDS3V40
Anode
Cathode
Ca
A
MA4140M
Anode
Cathode
Ca
A
LN846RP
Anode
Cathode
Ca
A


A
PHONO EQUALIZER
GND
(L ch)
PHONO
CD/AUX
REC OUT
TAPE 2/EXT
PLAYBACK
(R ch)
IC201
AN6552F
EQUALIZER
INPUT SELECTOR
S2-1 (PHONO)
S2-2 (TUNER)
S2-3 (CD/AUX)
S3-2 (TAPE2/EXT)
S3-1 (TAPE1)
S2-4 (LOUDNESS)
Rec. signal
(R) IN
(L) IN
From TUNER
POWER SUPPLY
AC
AC9.3V
REC OUT (R)
REC OUT (L)
TAPE 1
GND
PLAYBACK (R)
PLAYBACK (L)
-14.7
+14.7
G
IC602
SVIBA6144
METER AMP
IC601
SVIBA6144
METER AMP
(R ch)
(L ch)
METER AMP. Rch.
METER AMP. Lch.
J601
POWER AMPLIFIER
IC401
SVI3105A
POWER AMP
MUTE DET
RLY501
Q501
2SA992
RELAY DRIVE
D901~904
SVDS3V40
RECTIFIER
Power ON
4s
+60
-60
AC44
TONE CONTROL
IC301
M5218L
TONE AMP
VR302 100KG (BALANCE)
VR303-1 (BASS)
VR303-2 (BASS)
VR304-1 (TREBLE)
VR304-2 (TREBLE)
I
J801
(PHONO) (TUNER) (CD/AUX)
D801 D802 D803
D805 (TAPE1)
D804 (TAPE2)
D801~805
LN054330P
B
VOLUME
J301
VR301-1 100KB
VR301-2
(VOLUME)
L ch
MAIN
R ch
SPEAKERS
REMOTE
J402
J401
S4-1 (MAIN SPEAKERS)
S4-2 (REMOTE SPEAKERS)
on off
HEADPHONES
R413 2W 330
R414
H
AC 11.3V
POWER SUPPLY
TAPE 1
F
C1 0.01
F1 125V 5A
S1 (POWER)
J902
J901
AC11.3
AC9.3
AC9.1
AC44
T1
C
D
E
AC OUTLETS
(SWITCHED)
(UNSWITCHED)
R1 1/2 3.3M
11.4
1 2 3 4 5 6 7 8 9 10
A B C D E F


5
6
7
8
9
10
11
G
IC602
SVIBA6144
METER AMP
(R ch)
IC601
SVIBA6144
METER AMP
(L ch)
METER AMP. Rch.
METER AMP. Lch.
(POWER)
J601
POWER AMPLIFIER
IC401
SVI3105A
POWER AMP
MUTE DET
L401
L402
RLY501
D501
MA165
Q501
2SA992
RELAY DRIVE
D901~904
SVDS3V40
RECTIFIER
Power ON
4s
+60
-60
14.7
-14.7
AC44
SPEAKERS
L ch
MAIN
R ch
REMOTE
J402
J401
S4-1
(MAIN SPEAKERS)
S4-2
(REMOTE SPEAKERS)
HEADPHONES
H
11.4
C701
16V470
TONE CONTROL
IC301
M5218L
TONE AMP
(BASS)
(TREBLE)
VR302
100KG
(BALANCE)
UME
AC
GND
POWER SUPPLY
TAPE I
11.3V
J902
J901
D701
ISR35200
T1
C
D
E
F
C1 0.01
F1
125V 5A
S1
(POWER)
(SWITCHED)
AC OUTLETS
(UNSWITCHED)
R1 1/2 3.3M
AC 120V
(60Hz)

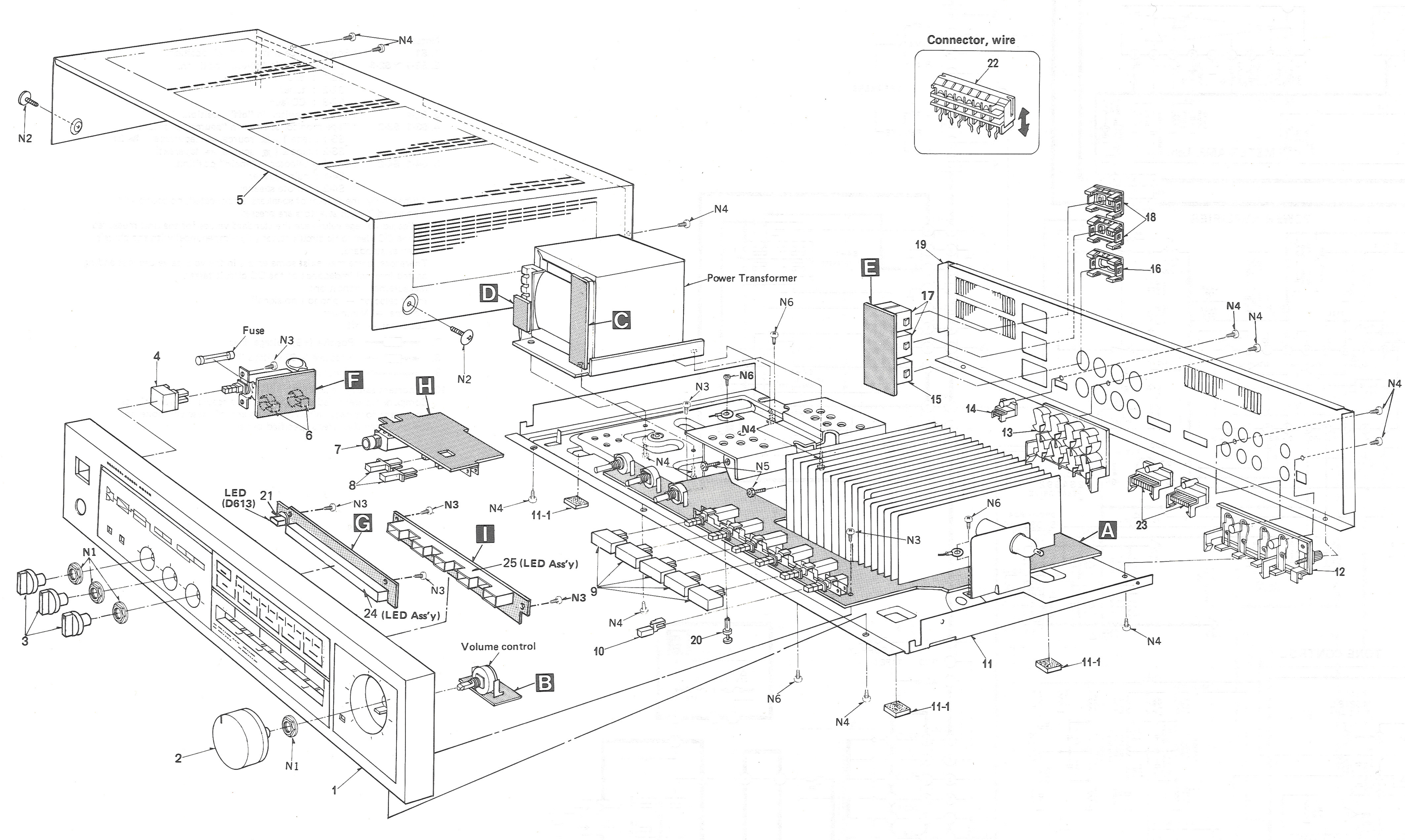
SCHEMATIC DIAGRAM

Notes:

1. **S1** : Power source switch in **"on"** position.
2. **S2-1 ~ S2-3** : Input selector in **"phono"** position.
   S2-1 : phono
   S2-2 : tuner
   S2-3 : CD/aux
3. **S2-4** : Loudness switch in **"off"** position.
4. **S3-1, S3-2** : Tape monitor selector in **"source"** position.
   S3-1 : tape 1 (■ source, ▬ tape/tape 1 ▶ 2)
   S3-2 : tape 2 (■ source, ▬ tape/ext)
5. **S4-1, S4-2** : Speaker selector in **"main"** position.
   S4-1 : main speaker
   S4-2 : remote speaker

   * When only one system of speakers is connected, no sound will be heard if both selectors are pressed.
6. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
   Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
   Measurement condition:
   Input selector — phono (no signal)
   Volume — Minimum
   Loudness — off
7. ━▭━ Positive (+B) voltage lines
8. -▭- Negative (—B) voltage lines
9. ⋯⋯⇨ Signal lines (L channel)
10. Important safety notice:
    Components identified by ⚠ mark have special, characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

EXPLODED VIEWS



Connector, wire
22
N4
N2
5
Power Transformer
D
C
E
19
18
16
17
15
N6
N4
N4
N4
Fuse
N3
4
F
6
N2
H
7
8
N3
N6
N4
N4
N5
14
13
LED
(D613)
21
N3
G
N3
I
25 (LED Ass'y)
N4
11-1
N6
N3
A
23
12
N1
3
24 (LED Ass'y)
N3
N3
9
N4
10
20
Volume control
B
N4
11
11-1
N6
N4
11-1
2
N1
1

A ~ I : Printed Circuit Boards, Refer to Schematic Diagram.

REPLACEMENT PARTS LIST

Notes:

1. Part numbers are indicated on most mechanical parts. Please use this part number for parts order.
2. Important safety notice: Components identified by ⚠ mark have special characteristics important for safety.
   When replacing any of these components, use only manufacturer's specified parts.
3. The parenthesized numbers in the column of description stand for the quantity per set.

Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC201	AN6552F	IC
IC301	M5218L	IC
IC401 ⚠	SVI3105A	IC
IC601, 602	SVIBA6144	IC
TRANSISTOR		
Q501	2SA992E	Transistor
DIODES		
D501	MA165	Diode
D601~610	LN863RCPP	L.E.D.
D613	LN846RP	L.E.D.
D701	1SR35200	Rectifier
D801 ~805	LN463YCPP	L.E.D.
D901~904 ⚠	SVDS3V40	Rectifier
D905, 906	MA4140−M	Diode
COILS		
L401, 402	SLQY07G−40	Choke
TRANSFORMERS		
T1 ⚠	SLT5N460	Power Source
VARIABLE RESISTORS		
VR301	EWCXSAF25B15	Volume, 100kΩ (B)
VR302	EWHF5AF20G15	Balance, 100kΩ (G)
VR303, 304	EWCS6A020C15	Tone, 100kΩ (C)
RELAY		
RL501	SSY126	Speaker

Ref. No.	Part No.	Description
FUSE		
F1 ⚠	XBA1F50NU14	125V, 5A
SWITCHES		
S1 ⚠	ESB8248V	Power Source
S2, 3	SSH655	Input Selector
S4	SSH2116	Speaker

Ref. No.	Part No.	Description	
CABINET and CHASSIS PARTS			
1	SYYU362KM	Front Panel Ass'y	(1)
2	SBN1125	Knob, Volume	(1)
3	SBN1089−1	Knob, Tone	(3)
4	SBC666	Button, Power	(1)
5	SKC1880K992	Cabinet	(1)
6	SJT391	Fuse Holder	(2)
7	SJJ134B	Jack, Headphone	(1)
8	SBC719	Button, Speaker	(2)
9	SBC824	Button, Selector	(5)
10	SBC619	Button, Loudness	(1)
11	SKUUZ900−KM	Bottom Board Ass'y	(1)
(11-1	(SKL293	Foot	(4)
12	SJF3062−5N	Input Terminal	(1)
13	SJF4818	Speaker Terminal	(1)
14	SJS306	Power Connector, 3 Pin	(1)
15 ⚠	SJS9234B	AC Inlet	(1)
16	SJS9234A	AC Inlet Cover	(1)
17 ⚠	SJS9233B	AC Outlet	(2)
18	SJS9233A	AC Outlet Cover	(2)

Ref. No.	Part No.	Description	
CABINET and CHASSIS PARTS			
19	SGP6820B	Rear Panel	(1)
20	SHR9094	Nylon Pin	(1)
21	SHG6393	Spacer, L.E.D.	(1)
22	SJT30343−V	Connector, 3 Pin	(1)
22	SJT30843−V	Connector, 8 Pin	(1)
22	SJT30643−V	Connector, 6 Pin	(1)
23	SJS804	Connector, 8 Pin	(2)
24	LN108327P1	L.E.D. Ass'y	(1)
25	LN054330P	L.E.D. Ass'y	(1)
SCREWS			
N1	SNE4021	Nut	(4)
N2	SNE2095−5	Cabinet	(2)
N3	XTB3+8G	Tapping, ⊕3×8	(7)
N4	XTBS3+8JFZ1	Tapping, ⊕3×8	(19)
N5	SNE2126	Power IC	(2)
N6	XTW3+8T	Tapping, ⊕3×8	(3)
ACCESSORIES			
A1 ⚠	SJA172−1	AC Cord	(1)
A2	SQF12766−2	Instruction Book	(1)
PACKING PARTS			
P1	SPG5728	Carton Box	(1)
P2	SPS4719−2	Pad, Left	(1)
P3	SPS4720−2	Pad, Right	(1)
P4	SPP723	Polyethylene Sheet	(1)

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